

CKII alpha Antibody
Rabbit mAb
Catalog # AP90241**Specification**

CKII alpha Antibody - Product Information

Application	WB, IHC, FC
Primary Accession	P68400
Reactivity	Rat
Clonality	Monoclonal
Other Names	
Casein kinase 2 alpha 1 polypeptide;Casein kinase II alpha subunit;CK II alpha;CK2 alpha;CK2A1;CKIIalpha;CSNK2A1	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	45144 Da

CKII alpha Antibody - Additional Information

Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CKII alpha
Description	Catalytic subunit of a constitutively active serine/threonine-protein kinase complex that phosphorylates a large number of substrates containing acidic residues C-terminal to the phosphorylated serine or threonine. Regulates numerous cellular processes, such as cell cycle progression, apoptosis and transcription, as well as viral infection. May act as a regulatory node which integrates and coordinates numerous signals leading to an appropriate cellular response.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

CKII alpha Antibody - Protein Information**Name** CSNK2A1**Synonyms** CK2A1

Function

Catalytic subunit of a constitutively active serine/threonine-protein kinase complex that phosphorylates a large number of substrates containing acidic residues C-terminal to the phosphorylated serine or threonine (PubMed: [11239457](http://www.uniprot.org/citations/11239457) [11704824](http://www.uniprot.org/citations/11704824) [16193064](http://www.uniprot.org/citations/16193064) [18411307](http://www.uniprot.org/citations/18411307) [18583988](http://www.uniprot.org/citations/18583988) [18678890](http://www.uniprot.org/citations/18678890) [19188443](http://www.uniprot.org/citations/19188443) [20545769](http://www.uniprot.org/citations/20545769) [20625391](http://www.uniprot.org/citations/20625391) [22017874](http://www.uniprot.org/citations/22017874) [22406621](http://www.uniprot.org/citations/22406621) [24962073](http://www.uniprot.org/citations/24962073) [30898438](http://www.uniprot.org/citations/30898438) [31439799](http://www.uniprot.org/citations/31439799)). Regulates numerous cellular processes, such as cell cycle progression, apoptosis and transcription, as well as viral infection (PubMed: [12631575](http://www.uniprot.org/citations/12631575) [19387551](http://www.uniprot.org/citations/19387551) [19387552](http://www.uniprot.org/citations/19387552)). May act as a regulatory node which integrates and coordinates numerous signals leading to an appropriate cellular response (PubMed: [12631575](http://www.uniprot.org/citations/12631575) [19387551](http://www.uniprot.org/citations/19387551) [19387552](http://www.uniprot.org/citations/19387552)). During mitosis, functions as a component of the p53/TP53-dependent spindle assembly checkpoint (SAC) that maintains cyclin-B-CDK1 activity and G2 arrest in response to spindle damage (PubMed: [11704824](http://www.uniprot.org/citations/11704824) [19188443](http://www.uniprot.org/citations/19188443)). Also required for p53/TP53-mediated apoptosis, phosphorylating 'Ser-392' of p53/TP53 following UV irradiation (PubMed: [11239457](http://www.uniprot.org/citations/11239457)). Phosphorylates a number of DNA repair proteins in response to DNA damage, such as MDC1, MRE11, RAD9A, RAD51 and HTATSF1, promoting their recruitment to DNA damage sites (PubMed: [18411307](http://www.uniprot.org/citations/18411307) [18583988](http://www.uniprot.org/citations/18583988) [18678890](http://www.uniprot.org/citations/18678890) [20545769](http://www.uniprot.org/citations/20545769) [21482717](http://www.uniprot.org/citations/21482717) [22325354](http://www.uniprot.org/citations/22325354) [26811421](http://www.uniprot.org/citations/26811421) [28512243](http://www.uniprot.org/citations/28512243) [30898438](http://www.uniprot.org/citations/30898438) [35597237](http://www.uniprot.org/citations/35597237)). Can also negatively regulate apoptosis (PubMed: [16193064](http://www.uniprot.org/citations/16193064) [22184066](http://www.uniprot.org/citations/22184066)). Phosphorylates the caspases CASP9 and CASP2 and the apoptotic regulator NOL3 (PubMed: [16193064](http://www.uniprot.org/citations/16193064)). Phosphorylation protects CASP9 from cleavage and activation by CASP8, and inhibits the dimerization of CASP2 and activation of CASP8 (PubMed: [16193064](http://www.uniprot.org/citations/16193064)). Phosphorylates YY1, protecting YY1 from cleavage by CASP7 during apoptosis (PubMed: [22184066](http://www.uniprot.org/citations/22184066)). Regulates transcription by direct phosphorylation of RNA polymerases I, II, III and IV (PubMed: [12631575](http://www.uniprot.org/citations/12631575)).

<http://www.uniprot.org/citations/19387550> target="_blank">19387550, PubMed:19387551, PubMed:19387552, PubMed:23123191). Also phosphorylates and regulates numerous transcription factors including NF-kappa-B, STAT1, CREB1, IRF1, IRF2, ATF1, ATF4, SRF, MAX, JUN, FOS, MYC and MYB (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552, PubMed:23123191). Phosphorylates Hsp90 and its co-chaperones FKBP4 and CDC37, which is essential for chaperone function (PubMed:19387550). Mediates sequential phosphorylation of FNIP1, promoting its gradual interaction with Hsp90, leading to activate both kinase and non-kinase client proteins of Hsp90 (PubMed:30699359). Regulates Wnt signaling by phosphorylating CTNNB1 and the transcription factor LEF1 (PubMed:19387549). Acts as an ectokinase that phosphorylates several extracellular proteins (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552). During viral infection, phosphorylates various proteins involved in the viral life cycles of EBV, HSV, HBV, HCV, HIV, CMV and HPV (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552). Phosphorylates PML at 'Ser-565' and primes it for ubiquitin-mediated degradation (PubMed:20625391, PubMed:22406621). Plays an important role in the circadian clock function by phosphorylating BMAL1 at 'Ser-90' which is pivotal for its interaction with CLOCK and which controls CLOCK nuclear entry (By similarity). Phosphorylates CCAR2 at 'Thr-454' in gastric carcinoma tissue (PubMed:24962073). Phosphorylates FMR1, promoting FMR1-dependent formation of a membraneless compartment (PubMed:30765518, PubMed:31439799). May phosphorylate histone H2A on 'Ser-1' (PubMed:38334665).

Cellular Location

Nucleus

Tissue Location

Expressed in gastric carcinoma tissue and the expression gradually increases with the progression of the carcinoma (at protein level).

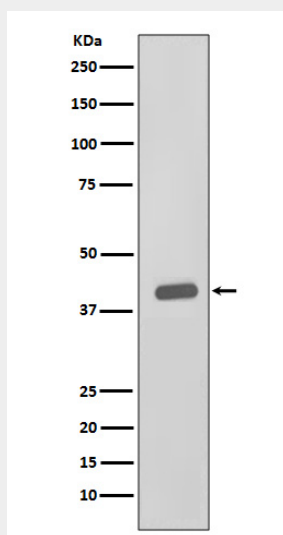
CKII alpha Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CKII alpha Antibody - Images



Western blot analysis of CKII alpha expression in HeLa cell lysate.